

# Taxonomic revision of the genus *Iris* L. (Iridaceae Juss.) for the flora of Central Asia

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**Abstract:** A new conspectus of the genus *Iris* (including the genera *Juno* and *Iridodictyum*) is presented for the rich flora of Central Asia. Two new combinations as well as new epitheta for two species are proposed.

**Zusammenfassung:** Die Gattung *Iris* (inklusive der Gattungen *Juno* und *Iridodictyum*) wurde für die reiche Flora Zentralasiens systematisch bearbeitet. Zwei neue Kombinationen, sowie neue Epitheta für zwei Arten werden vorgeschlagen.

**Key words:** Taxonomy, *Iris*, *Juno*, Central Asia, nomenclature.

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## Introduction

During the last 70 years in all floristic revisions for Central Asia made by A. I. VVEDENSKY (1941, 1971) section *Juno* was treated as a separated genus. 30 species were mentioned and several new species were newly described in his last revision. Interestingly enough, that all other genera of *Iridaceae* (including *Iris*) has been revised in “Conspectus Florae Asiae Mediae” by O. TSCHERNEVA (1971). Ten years before G. RODIONENKO (1961) separated from *Iris* genus *Iridodictyum* with 2 species with retic-

ulate bulb tunics. Amazingly that 36 species of *Iris* are endemic for this area (fig. 1–3). Nomenclature changes has been started by P. WENDELBO (1975). R. KAMELIN (1981) and later on T. Hall et A. SEISUMS (2011) made several new combinations from *Juno* restoring to *Iris*. Nevertheless, several taxa needed in nomenclature correction as well new ones described recently from this area. No doubt, that Central Asia can be treated as one of the largest centers of biodiversity of genus *Iris* L. and proposed conspectus given below based on revisions of R. KAMELIN (1973) and P. WENDELBO (1975) can be helpful in tangled taxonomy occurring in this genus.

## Results and Discussion

**Genus *Iris* TOURN. ex L.** Sp. Pl. 38 (1753). Gen. Plant. Ed. 5: 24 (1754).

Type: *Iris germanica* L.

**Subgen. *Iris* L.**

Type: *Iris germanica* L.

**Sect. *Limniris* TAUSCH**, Hort. Canalius 1 (1823).

Type: *I. sibirica* L.

1. *I. songarica* SCHRENK, FISCH. et C. A. MEY. Enum. pl. nov. 1: 3 (1841) – BOISS., Fl. Or. 5: 126 (1884) – DYKES, Gen. Iris (1913) 71 – B. FEDTSCH., Flora URSS. 4: 516 (1935) – VVED., Flora Uzbek. 1 (1941) 506. – TSHERNEVA, Consp. Fl. As. Med. 2: 126 (1971) – WENDELBO, Flora Iranica 112: 19 (1975).  
Type: LE (isotype K). Distribution: Iran, Afghanistan, Turkmenistan, Uzbekistan, Tadzhikistan, Kazakhstan, Mongolia, China.
2. *I. loczyi*, KANITZ, Anov (1891) 58, tab. 6, fig. 11, 5 – KANITZ, Result. bot. Samml. 2: 733 (1898) – *I. tenuifolia* PALL. var. *tianschanica* MAXIM., Bull. Acad. Sci. Petersb. 26: 512 (1880) — *I. tianschanica* VVED. ex WORON. et POPOV, Fl. Turkm. 1: 325 (1932) – B. FEDTSCH., Flora URSS. 4: 515 (1935) – VVED., Flora Uzbek. 1: 506 (1941). – Ikonn., Opređ. rast. Pamira 89 (1963) – Tscherneva, Consp. Fl. As. Med. 2: 126 (1971) – WENDELBO, Flora Iranica 112: 20 (1975).  
Type: BP. Distribution: Iran, Afghanistan, Pakistan, Uzbekistan, Tadzhikistan, Kazakhstan.
3. *I. tenuifolia* PALL., RIESE 3: 714 (1778), tab. C, fig. 2 – B. FEDTSCH., Flora URSS. 4: 515 (1935) – Tscherneva, Consp. Fl. As. Med. 2: 125 (1971) — *I. acaulis* PALL., RIESE 3: 213 (1778) – *I. REGELII* MAXIM., Acta Hort. Petrop. 6: 115 (1879) — DYKES Gen. Iris 32 (1913) — *I. tenuifolia* PALL. var. *tianschanica* MAXIM., Bull. Acad. Sci. Petersb. 26: 512 (1880) — *I. tianschanica* VVED. ex WORON. et POPOV, Fl. Turkm. 1: 325 (1932).  
Type: BM (LINN). Distribution: Russia (Volga), Siberia, Uzbekistan, Kazakhstan, Mongolia, China.
4. *I. ruthenica* Ker Gawl., Bot. Mag. 28 (1808), tab. 1123 – B. FEDTSCH., Flora URSS. 4: 517 (1935) — Tscherneva, Consp. Fl. As. Med. 2: 126 (1971) — *I. caespitosa* PALL. ex Link, Spreng., Schraed. et Link, Jahrb. Gewachsk. 1: 3 (1820) – *I. verna* L., Sp. Pl. 1: 39 (1753) — DYKES, Gen. Iris 52 (1913) – Poljakov, Fl. Kazakh. 2: 237 (1958) – *I. brevītuba* VVED. et Nikitina, Fl. Kirg. 3: 131 (1951).  
Type: BM (LINN). Distribution: Siberia, Kazakhstan, Mongolia, China, Japan.
5. *I. lactea* PALL., Reise 3: 713 (1776) — Tscherneva, Consp. Fl. As. Med. 2: 127 (1971) – *I. biglumis* Vahl, Enum. Pl. 2: 149 (1806) – *I. haematophylla* Link, Enum. Pl. Hort. Bot. Berol. 1: 60 (1821) – *I. iliensis* Poljakov, Not. Syst. Herb. Inst. Bot. Ac. Sc. URSS 12: 88 (1950).  
Type: LE. Distribution: Siberia, Kazakhstan, Mongolia.
6. *I. oxypetala* BUNGE, Enum. Pl. China Bor. 63 (1832) – *I. moorcroftiana* WALL. ex D. DON, Trans. Linn. Soc. 18: 315 (1841) – VVED., Fl. Uzb. 1: 507 (1941) — Tscherneva, Consp. Fl. As. Med.

2: 127 (1971) – WENDELBO, Flora Iranica 112: 22 (1975).

Type: LE. Distribution: Siberia, Afghanistan, Pakistan, Nepal, Uzbekistan, Tadzhikistan, Kirgizstan, Kazakhstan, Mongolia, China, Japan.

7. *I. spuria* L., Sp. Pl. 39 (1753).

subsp. *halophila* (PALL.) MATHEW & WENDELBO ex WENDELBO, Flora Iranica 112: 23 (1975) – *I. spuria* PALL., Reise... 2: 733 (1773) – B. FEDTSCH., Flora URSS 4: 526 (1935) – Tscherneva, Consp. Fl. As. Med. 2: 128 (1971) — *I. guldenstaediana* var. *sogdiana* MAXIM., Bull. Ac. Sc. Petersb. 26: 518 (1880) — *I. spuria* var. *halophila* DYKES, Gen. Iris 62 (1913) – *I. halophila* var. *sogdiana* (BUNGE) Grubov, Nov. Syst. Pl. Vasc. 6: 36 (1969) – MATHEW, Iris 118 (1981).

Type: BM (LINN). Distribution: Caucasus, Iran, Turkmenistan, Afghanistan, Pakistan, Central Asia, Siberia, Mongolia.

**Sect. *Hexapogon* (BUNGE ex ALEF.) BAKER**, Gard. Chron. 2, 5: 787 (1876), emend. Rodion., Rod Iris 198 (1961).

Type: *I. falcifolia* BUNGE

**Subsect. *Hexapogon* BENTH. ex BENTH. et HOOK.** Gen. Plant. 3: 687 (1883) – sect. *Regelia* DYKES, Gen. Iris 123 (1913) – subsect. *Regelia* (DYKES) RODION., Rod Iris 198 (1961).

Type: *I. falcifolia* BUNGE

8. *I. falcifolia* BUNGE, Mem. Ac. Petersb. Sav. Etrang. Acad. Petersb. 7: 505 (1852) – B. FEDTSCH., Flora URSS. 4: 544 (1935) – VVED., Flora Uzbek. 1: 510 (1941) – Tscherneva, Consp. Fl. As. Med. 2: 130 (1971) – WENDELBO, Flora Iranica 112: 37 (1975).  
Type: P (isotype K). Distribution: Iran, Afghanistan, Pakistan, Uzbekistan, Turkmenistan.

9. *I. longiscapa* Ledeb., Fl. Ross. 4: 83 (1853) – B. FEDTSCH., Flora URSS. 4: 544 (1935) — VVED., Fl. Uzb. 1: 510 (1941) — Tscherneva, Consp. Fl. As. Med. 2: 130 (1971) – *I. filifolia* BUNGE, Mem. Ac. Peters. Sav. Etrang. 7: 506 (1852).  
Type: LE. Distribution: Uzbekistan, Tadzhikistan, Turkmenistan, Kazakhstan.

10. *I. lineata* FOSTER ex REGEL, Gartenfl. 36: 201 (1887), tab. 1244, fig. 1–7 – Tscherneva, Consp. Fl. As. Med. 2: 130 (1971) – *I. karategina* B. FEDTSCH., Flora URSS. 4: 542 (1935) – *I. kuschkinsis* Grey—Wilson et MATHEW, Kew Bull. 29, 1: 67 (1974) — WENDELBO, Flora Iranica 112: 38 (1975).  
Type: No. Distribution: Afghanistan, Tadzhikistan.

11. *I. darwasica* REGEL, Acta Hort. Petrop. 8: 679 (1884) — B. FEDTSCH., Flora URSS. 4: 541 (1935) – VVED., Фл. Тадж. CCP. 2: 380 (1963) – Tscherneva, Consp. Fl. As. Med. 2: 129 (1971) – WENDELBO, Flora Iranica 112: 39 (1975) – *I. suworowii* REGEL, Acta Hort. Petrop. 9: 619 (1886).  
Type: LE. Distribution: Tadzhikistan, Afghanistan.

12. *I. korolkowii* REGEL, Acta Hort. Petrop. 2: 432 (1873) – DYKES Gen. Iris 124 (1913) – B. FEDTSCH., Flora URSS. 4: 541 (1935) – VVED., Flora Uzbek. 1: 508 (1941) – Tscherneva, Consp. Fl. As. Med. 2: 130 (1971) – WENDELBO, Flora Iranica 40: 112 (1975).  
Type: LE. Distribution: Uzbekistan, Kazakhstan, Tadzhikistan, Afghanistan.



Fig.1.: Flower of *Iris hippolyti* (Vved.) Kamelin ex Takht.



Fig.2: Flower of *Iris kolpakowskianum* Regel



Fig.3: Flowers of *Iris magnifica* (Vved.) F. O. Khass. et Rakhimova



Fig.4: Flowers of *Iris zenaidae* (Vved.) F. O. Khass. et Rakhimova

13. *I. hoogiana* DYKES, Gard. Chron. 29: 397 (1816), fig. 84 – B. FEDTSCH., Flora URSS. 4: 542 (1935) — TSCHERNEVA, Consp. Fl. As. Med. 2: 129 (1971) — *I. splendens* O. FEDTSCH., Bull. Jard. Bot. Rep. Russe 23: 111 (1924).  
Type: No. Distribution: Uzbekistan, Tadzhikistan.
14. *I. stolonifera* MAXIM., Bull. Ac. Sc. Petersb. 26: 535 (1880) — VVED., Fl. Uzb. 1: 508 (1941) — B. FEDTSCH., Flora URSS. 4: 540 (1935) — TSCHERNEVA, Consp. Fl. As. Med. 2: 129 (1971) — *I. leichtlini* REGEL, Acta Hort. Petrop. 8: 680 (1884).  
Type: LE. Distribution: Uzbekistan, Tadzhikistan.
15. *I. bloudowii* LEDEB., Ic. Pl. Fl. Ross. 2: 5 (1853), tab. 101 – B. FEDTSCH., Flora URSS. 4: 550 (1935) — POLJAKOV, Fl. Kazakh. 2: 245 (1958) — TSCHERNEVA, Consp. Fl. As. Med. 2: 131 (1971) — *I. flavissima* var. *umbrosa* BUNGE ex LEDEB., Fl. Alt. 1: 58 (1829).  
Type: LE. Distribution: Kazakhstan, Siberia, Far East, Mongolia.
16. *I. scariosa* WILLD. ex LINK. in SPRENG., SCHRAED. et LINK. Jahrb. 1: 71 (1820) — B. FEDTSCH., Flora URSS. 4: 550 (1935) — POLJAKOV, Fl. Kazakh. 2: 245 (1958) — TSCHERNEVA, Consp. Fl. As. Med. 2: 131 (1971) — *I. glaucescens* BUNGE ex LEDEB., Fl. Alt. 1: 58 (1829).  
Type: B. Distribution: Kazakhstan, Siberia, Mongolia.
17. *I. alberti* REGEL, Acta Hort. Petrop. 5: 260 (1877) — B. FEDTSCH., Flora URSS. 4: 553 (1935) — POLJAKOV, Fl. Kazakh. 2: 246 (1958) — TSCHERNEVA, Consp. Fl. As. Med. 2: 132 (1971).  
Type: LE. Distribution: Kazakhstan.
- Subsect. *Oncocyclus* (SIEMSEN) BENTH. ex BENTH. et HOOK. 3: 687 (1883).**  
Type: *I. paradoxa* Stev.
18. *I. acutiloba* C. A. MEY., Verz. Pfl. Cauc. 32 (1831)  
subsp. *lineolata* (TRAUTV.) MATHEW & WENDELBO ex WENDELBO, Flora Iranica 112: 32 (1975) — *I. acutiloba* var. *lineolata* TRAUTV., Acta Hort. Petrop. 1: 24 (1870). — *Oncocyclus Helena* KOCH, Linnae 21: 639 (1848) — *I. ewbankiana* FOSTER, Gard. Chron. 29: 397 (1901) — B. FEDTSCH., Flora URSS. 4: 537 (1935) — TSCHERNEVA, Consp. Fl. As. Med. 2: 129 (1971).  
Type: LE. Distribution: Turkmenistan (Kopehdagh).
- Subgen. *Hermodactyloides* SPACH, Ann. Sc. Nat. Ser. 3, 5: 91 (1846) – sect. *Xiphion* BAKER, Journ. Linn. Soc. 16: 122 (1877) — sect. *Reticulata* DYKES, Gen. Iris 220: (1913) – gen. *Iridodictyum* RODION., Rod. Iris 201 (1961) — TSCHERNEVA, Consp. Fl. As. Med. 2: 139 (1971).**  
Type: *I. reticulata* M. BIEB.
19. *I. kolpakowskiana* REGEL, Acta Hort. Petrop. 5: 263 (1877) — *Xiphion kolpakowskianum* BAKER, Bot. Mag. (1880) — B. FEDTSCH., Flora URSS. 4: 556 (1935) — *Iridodictyum kolpakowskianum* TSCHERNEVA, Consp. Fl. As. Med. 2: 139 (1971).  
Type: LE (isotype K). Distribution: Kazakhstan, Uzbekistan.
20. *I. winklerii* REGEL, Acta Hort. Petrop. 8: 677 (1883) — B. FEDTSCH., Flora URSS. 4: 554 (1935) — *Iridodictyum winklerii* TSCHERNEVA, Consp. Fl. As. Med. 2: 140 (1971).  
Type: LE. Distribution: Kazakhstan, Kirgizstan, Uzbekistan.
21. *I. kurbanovii* F. O. KHAHAN. et RAKHIMOVA nom. nov. (*Iris* subgen. *Hermodactyloides* SPACH) – *Iridodictyum kopetdagense* KURBANOV, Bot. Zhurn. 83, 6: 110 (1998), non *Iris kopetdagensis* (VVED.) MATHEW et WENDELBO = *Juno kopetdagense* VVED. subgen. *Scorpiris* SPACH.  
Type: LE. Distribution: Turkmenistan.
- The epitheton “*kopetdagense*” already exists under the genus *Juno* e. g.: *J. kopetdagense* (VVED.) MATHEW et WENDELBO with basionym *Iris kopetdagense* VVED. Therefore, we used the surname of Dr. J. KURBANOV, who described this species, which is close to *I. reticulata* M. BIEB.
22. *I. pskemensis* Ruksans, Buried Treasures 363 (2007), fig. 138.  
Holotype: GB. Distribution: Uzbekistan.
- Subgen. *Scorpiris* SPACH, Ann. Sc. Nat. Ser. 3, 5: 91 (1846) – gen. *Juno* TRATT. ex Roemer et Schultes, Syst. Veg. 1: 471 (1817) – sect. *Juno* (TRATT.) BENTH. ex BENTH. et HOOK., Gen. Plant. 3: 687 (1883) – subgen. *Juno* (TRATT.) BAKER, HAND. Irid. 2 (1892).**  
Type: *I. persica* L.
- Sect. *Juno* (TRATT.) BENTH. ex BENTH. et HOOK., Gen. Plant. 3: 687 (1883).**  
Type: *I. persica* L.
23. *I. fosteriana* AITCH. & BAKER, Trans. Linn. Soc. Bot. 3: 114 (1888) — WENDELBO, Flora Iranica 112: 57 (1975) — VVED., Flora URSS. 4: 560 (1935) — *I. caucasica* HOFFM. var. *bicolor* REGEL, Acta Hort. Petrop. 9: 620 (1884) — *Juno fosteriana* (AITCH. & BAKER) Rodion., Rod. Iris 208 (1961) — VVED., Consp. Fl. As. Med. 2: 134 (1971).  
Type: K. Distribution: Turkmenistan, Afghanistan.
24. *I. bucharica* FOSTER, Gard. Chron. Ser. 3, 31: 385 (1902). — VVED., Flora URSS. 4: 570 (1935) — WENDELBO, Flora Iranica 112: 58 (1975) — *Juno bucharica* (FOSTER) VVED., Fl. Uzbek. 1: 570 (1941) — VVED., Consp. Fl. As. Med. 2: 137 (1971).  
Type: LE. Distribution: Afghanistan, Tadzhikistan, Uzbekistan.
25. *I. orchioides* DYKES, Genus Iris 203 (1913) sensu – VVED., Flora URSS. 4: 572 (1935) — VVED., Consp. Fl. As. Med. 2: 138 (1971).  
Type: LE. Distribution: Kazakhstan, Uzbekistan.
- I. orchioides* have been described from the plants collected in Afghanistan. The plants with yellow tepals growing naturally in Western Tien–Shan under this name sensu VVEDENSKY (1935; 1971) seems to be separated species. This taxon could not be treated as a synonym of *I. bucharica*, which has whitish tepals.
26. *I. kuschakewiczii* B. FEDTSCH. ex O. et B. FEDTSCH., Bull. Jarb. Bot. Peters. 5: 158 (1905) — VVED., Flora URSS. 4: 568 (1935) — *Juno kuschakewiczii* VVED., Consp. Fl. As. Med. 2: 136 (1971).  
Type: LE. Distribution: Kazakhstan.
27. *I. inconspicua* (VVED.) T. HALL et SEISUMS, Bot. Journ. Linn. Soc. 167, 3: 300 (2011) — VVED., Flora URSS. 4: 562 (1935) — *Juno inconspicua* VVED., Consp. Fl. As. Med. 2: 136, 321 (1971).  
Type: TASH. Distribution: Kazakhstan.

28. *I. subdecolorata* (VVED.) F. O. KHASS. et RAKHIMOVA **comb. nov.** Basionym = *Juno subdecolorata* VVED., **Fl. Uzb. 1: 516 (1941) non VVED. & al., Key Fl. Tashkent 75 (1923)** — VVED., *Consp. Fl. As. Med.* 2: 137 (1971) — *Juno almaatensis* Pavlov, *Vest. AN KazSSR* 3: 26 (1950).  
Type: LE. Distribution: Uzbekistan, Kazakhstan.

29. *I. fedtschenkoi* F. O. KHASS. et RAKHIMOVA **nom. nov.** = *Iris coerulea* B. FEDTSCH., **Bull. Herb. Boiss. 4: 917 (1904) nom. illeg.** — VVED., *Flora URSS.* 4: 569 (1935) — *Juno coerulea* VVED., *Consp. Fl. As. Med.* 2: 137 (1971).  
Type: No. Distribution: Kazakhstan.

For the first time the name *Iris coerulea* was used by E. SPACH (1846). Now it became a synonym of *I. pumila* L.

30. *I. vicaria* (VVED.) T. Hall et Seisums, *Bot. Journ. Linn. Soc.* 167, 3: 300 (2011) — *Juno vicaria* VVED., *Flora URSS.* 4: 569 (1935) — VVED., *Consp. Fl. As. Med.* 2: 137 (1971).  
Type: TASH. Distribution: Uzbekistan, Tadjikistan, Turkmenistan.

31. *I. warleyensis* FOSTER, *Gardn. Chron.* 31: 386 (1902), fig. 134 — VVED., *Flora URSS.* 4: 570 (1935) — *Juno warleyensis* VVED., *Consp. Fl. As. Med.* 2: 137 (1971).  
Type: No. Distribution: Uzbekistan, Tadjikistan, Turkmenistan.

32. *I. magnifica* (VVED.) F. O. KHASS. et RAKHIMOVA **comb. nov.** Basionym = *Juno magnifica* VVED., **Fl. Uzb. 1: 516 (1941)** — *Juno magnifica* VVED., *Consp. Fl. As. Med.* 2: 137 (1971) — *Iris caucasica* var. *major* MAXIM., *Bull. Ac. Sc. Petersb.* 28: 689 (1880) — *Iris amankutensis* O. FEDTSCH., *Bull. Jard. Bot. Princ.* 115 (1924) nom. nudum.  
Lectotype: TASH. Distribution: Uzbekistan.

The name *I. magnifica* was already used in *Flora URSS* 4: 571 (1935), but no valid latin description within genus *Iris* was published until now. It is necessary to make a new combination although this name was in use more than 70 years.

33. *I. leptorrhiza* VVED., *Bull. Univ. As. Centr.* 21: 151 (1935) — *Juno leptorrhiza* VVED., *Consp. Fl. As. Med.* 2: 139 (1971).  
Type: LE. Distribution: Tadjikistan.

34. *I. pseudocapnoides* Ruksans, *Buried Treasures* 362 (2007), fig. 108, 109.  
Holotype: GB. Distribution: Uzbekistan.

We did not see any material of this species illegally collected in Uzbekistan in 1975 and 1996. According to the first description, this species seems to be very close to *I. orchioides* DYKES sensu VVED. (1935: 1971).

35. *I. zaprjagaevii* (N. V. Abramov) T. Hall et Seisums, *Bot. Journ. Linn. Soc.* 167, 3: 300 (2011) — *Juno zaprjagaevii* N. V. Abramov, *Nov. Syst. Vassh. Rast.* 8: 115 (1971).  
Type: LE. Distribution: Tadjikistan.

36. *I. willmottiana* FOSTER, *Gardn. Chron.* 29: 261 (1901), fig. 100 — VVED., *Flora URSS.* 4: 572 (1935) — *Juno willmottiana* VVED., *Consp. Fl. As. Med.* 2: 138 (1971).  
Type: No. Distribution: Uzbekistan.

37. *I. zenaidae* (VVED. ex TSCHERNEVA) F. O. KHASS. et RAKHIMOVA **comb. nov.** Basionym = *Juno zenaid-*

*ae* VVED., **Consp. Fl. As. Med. 2: 138, 322 (1971).**

Type: TASH. Distribution: Kirgizstan.

Still we did not decide about status of well-known in Europe *I. graeberiana* Sealy (collected somewhere in Kirgizstan) because no herbarium material, including type is not presented in K, BM or LE. This situation looks like the same as in case of *I. hoogiana* DYKES. Illustration given in the first description published in *Botanical Magazine* (1950) is contradicted with the studied type specimen as well as living plant (Fig. 4) collected by G. Lazkov in locus classical location (Fergan mnts. range). According to the form of outer tepals and blades of style they are 2 separated species.

38. *I. svetlanae* (VVED. ex TSCHERNEVA) F. O. KHASS., *Red Data Book of Uzb. ed. 4: 85 (2009)* — *Juno svetlanae* VVED., *Consp. Fl. As. Med.* 2: 138, 322 (1971).  
Type: TASH. Distribution: Uzbekistan.

39. *I. maracandica* (VVED.) WENDELBO, *Bot. Not.* 128, 2: 216 (1975) — VVED., *Flora URSS.* 4: 574 (1935) — *Juno maracandica* VVED., *Consp. Fl. As. Med.* 2: 138 (1971).  
Type: TASH. Distribution: Uzbekistan.

40. *I. hippolyti* (VVED.) KAMELIN ex TAKHT., *Redkie Izchez. Vidy Fl. SSSR*, ed. 2: 102 (1981) — *Juno hippolyti* VVED., *Consp. Fl. As. Med.* 2: 139 (1971).  
Type: TASH. Distribution: Uzbekistan.

41. *I. tubergeniana* FOSTER, *Gardn. Chron.* 25: 225 (1889) — VVED., *Flora URSS.* 4: 573 (1935) — *Juno tubergeniana* VVED., *Consp. Fl. As. Med.* 2: 139 (1971).  
Type: No. Distribution: Uzbekistan.

42. *I. capnoides* (VVED.) T. HALL et SEISUMS, *Bot. Journ. Linn. Soc.* 167, 3: 300 (2011), *J. capnoides* VVED., *Consp. Fl. As. Med.* 2: 135, 321 (1971).  
Type: TASH. Distribution: Uzbekistan, Tadjikistan.

43. *I. tadshikorum* VVED., *Bull. Univ. As. Centr.* 21: 152 (1935) — VVED., *Consp. Fl. As. Med.* 2: 135 (1971).  
Type: LE. Distribution: Tadjikistan.

44. *I. parvula* (VVED.) T. HALL et SEISUMS, *Bot. Journ. Linn. Soc.* 167, 3: 300 (2011) — VVED., *Flora URSS.* 4: 562 (1935) — *Juno parvula* VVED., *Consp. Fl. As. Med.* 2: 135 (1971).  
Type: TASH. Distribution: Uzbekistan, Tadjikistan.

45. *I. linifolia* O. FEDTSCH., *Bull. Jard. Bot. Petersb.* 5: 159 (1905) — VVED., *Flora URSS.* 4: 564 (1935) — *Juno linifolia* VVED., *Consp. Fl. As. Med.* 2: 135 (1971).  
Type: LE. Distribution: Uzbekistan, Tadjikistan, Kirgizstan.

46. *I. vvedenskyi* (NEVSKI ex WORON. et POPOV) NEVSKI, *Trudy Bot. Inst. Akad. Nauk S.S.S.R.*, Ser. 1, *Fl. Sist. Vyssh. Rast.* 4: 331. 1937 — VVED., *Flora URSS.* 4: 564 (1935) — *Juno vvedenskyi* VVED., *Consp. Fl. As. Med.* 2: 135 (1971).  
Type: LE. Distribution: Uzbekistan, Turkmenistan.

47. *I. narynensis* O. FEDTSCH., *Bull. Jard. Bot. Petersb.* 5: 159 (1905) — VVED., *Flora URSS.* 4: 567 (1935) — *Juno narynensis* VVED., *Consp. Fl. As. Med.* 2: 136 (1971).  
Type: LE. Distribution: Kirgizstan.

48. *I. narbuti* O. FEDTSCH., *Izv. Ob. Ljub. Est. Antr. I Etn.* 103: 147 (1902) — VVED., *Flora URSS.* 4: 567 (1935) — *I.*

*dangerensis* B. FEDTSCH. ex O. et B. FEDTSCH., Bull. Jarb. Bot. Peters. 5: 157 (1905) – *I. hissarica* O. FEDTSCH. ex Kneuck., Allg. Bot. Zeitsch. 9: 157 (1905). — *Juno narbuti* VVED., Consp. Fl. As. Med. 2: 136 (1971).  
Type: LE. Distribution: Uzbekistan, Tadzhikistan, Kazakhstan.

**Sect. *Physocaulon* (RODION.) MATHEW et WENDELBO, ex WENDELBO**, Flora Iranica 112: 59 (1975) — *Physocaulon* RODION., Rod Iris 208 (1961).

Type: *I. drepanophylla* AITCH. et BAKER

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